

VEER NARMAD SOUTY GUJARAT UNIVERSITY, SURAT.

M.D. FORENSIC MEDICINE

DEGREE COURSE

ADMISSION RULES :

A candidate for admission to M.D. Forensic medicine degree course must have received the M.B.B.S. degree of South Gujarat University or any other University recognized by with the Gujarat Medical Council .

Prior to registration to this P.G. Degree course the candidate must have completed one year of pre registration training in the department of forensic medicine as a tutor of Resident Pathologist or a Casualty Medical Officer in any teaching hospital approved by the Gujarat Government.

The P.G. Course loading to M.D. forensic medicine will be for two years after the preregistration period of one year as mentioned above.

The candidate who appear for M.D. Degree examination should submit the dissertation / Thesis three months prior to the commencement of the examination . After the approval of the dissertation only one candidate will be allowed to appear in the written and practical examinations. The University should inform the candidate one month in advance about the approval of the dissertation . The approval of the Professor – in – charge of the P.G. Centre in forensic medicine .

During the course the candidate will be posted for training at various departments by the Professor in – charge of the P.G. Centre in forensic medicine as part of P.G. training. The candidate will have to repeat his training in the concerned department in case there is an unsatisfactory report form any one of these departments or the professor in charge of P.G. Centre in forensic medicine . Thus the duration of the course may be exetended beyond two year.

The record book which is to be submitted in the examination should be submitted along with the dissertation by the candidate .

General rules governing the selection of candidate for P.G. degree course of South Gujarat University are applicable to the candidates seeking admission to M.D. forensic medicine degree course of this University.

While selecting the candidate of merit basis preference will given to the South Gujarat University students . If the candidates are not available from this university of Gujarat State will be considered . There after if no candidates are available from these two categories , the candidate from the other universities out side Gujarat state will be considered for selection.

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(Para – Clinic – 1)

(A) FORENSIC PATHOLOGY INCLUDING THENETOLOGY :

Inquests, Courts and Legal Procedures ; Investigation of scene of death, Medicological autopsy and exhumation procedures; Identification of the dead; Estimation of the time of death ; force injurles; Death from currting end stabbing wounds; fire- arm injuries; General features and medicological aspects of wounds trauma and diseases; Death from acute nerogenic cardiovascular failure ; Death from interference with exygenation – asphyxial, Hypoxic and Anoxic deaths; Death from burns. Electricity and lightening ; death from starvation; Heat and cold exposures; Sudden unexpected natural deaths; Still births and infant deaths; Death from rape and sexual assaults; Death from criminal miscarriage; Transportation fatalities; Death from The rapeutio mishaps; Death from poisoning and Drug Abuse; Artefacts in Forensic Pathology; Negetive and obscure autopsies; Identification of trace evidences and biological materials; Collection, preservation packing and dispatch of organs and tissues for laboratory examinations; Physical evidence in criminal cases; Forensic Pathologist as a witness; Radiology as an aid to Forensic Pathology.

(B) HISTORY OF FORNSIC MEDICINE CLINICAL FORENSIC MESICINE AND FORENSIC PSYCHIATRY :

Historical development and progress of Forensic Medicine in India and abroad; medical examination of living subjects for the determination of age, sex, race, injuries, poisoning, impotency, sterility, virginity , pregnancy, delivery, legitimacy and paternity; examination of victim and accused in rape and unnatural sexual offences; certification of fitness, disease, death and drunkenness, disability evaluation and medical examination in insurance cases; mediolegal aspects of emergencies in general and hospital prace, recording of dying declaration , medicolegal aspects of resuscitation and intensive care.

Medico legal aspects of insanity and abnormal human behaviour classification and causes of insanity, psychopathic personality and the mentally retarded; sexual deviations and perversions; diagnosis of insanity and feigned insanity; restraint of a lumatic; amnesia, feigned deaf – mutism and melingering ; medicolegal value of E.C.G., lie – detector and truth serum (Narco – analysis) ; Civil and criminal responsibilities of the insene; procedure of examination and certification of mentally ill; code of criminal procedure relating to an insane criminal; psychiatric disabilities following trauma and lunancy acts; psychiatrist in the court of law problems of confidentiality and privileged communication; medicolegal aspects of psychiatric emergencies.

(C) FORENSIC TOXICOLOGY AND MEDICAL JURISPRUDENCE :

Law relating to drugs and poisons; medicolegal aspects and pattern of poisoning in India ; classification of poisons ; routes of administration and action of poisons; diagnosis of poisoning in the living and dead; post mortem examination in a cases of

poisoning and collection, preservation, packing and dispatch of viscera and other biological materials for chemical analysis in poisoning cases; duties of medical man in a suspected cases of poisoning Scheme of general treatment and management in a cases of poisoning; toxicological and medicolegal aspects and treatment of various poisons; medicolegal aspects of drug dependence and drunkenness; radiation hazards and war gases; principles of common laboratory and analytical methods used for isolation and identification of poisons. Toxicologist in the court of law.

Statutes relating to medical and allied professions; Hippocrates Oath and the codes of ethics; powers and functions of the Indian and State Medical Councils; regulation and maintenance of the standard of medical practitioners; ethical and legal requirements of the practice of medicine - infamous conduct and disciplinary control; doctor's duties in criminal matters; legal and ethical aspects of right of unborn and the minors; legal and ethical aspects of family planning and population control - abortion; sterilization and contraception; medicolegal. Aspects relating to artificial insemination; divorce and nullity of marriages legal and ethical aspects of suicide and Euthenasis; medicolegal aspects of moment of death and organ transplantation, legal and ethical problems relating to therapeutic trials and human experimentation, health hazards in industries and professions and their medicolegal aspects; doctors duties under the workman's compensation acts; professional liability insurance and medical defence societies; standard of care in diagnosis and treatment - medical negligence in general and hospital practice and therapeutic misadventures; consent in medical practice; medicolegal aspects of adverse drug reactions and iatrogenic states; medical expert witness and his testimony problems of confidentiality and privileged communications.

(D) FORENSIC BIOCHEMISTRY, IMMUNOLOGY AND HISTOPATHOLOGY :

- Postmortem chemistry of blood C.S.F., Vitreous humour.
- Composition and identification of body fluids - blood, semen, saliva, sweat, faeces, urine, bile, milk, sputum and C.S.F. etc.
- Laboratory findings and investigations in cases of myocardial ischaemia and injuries; rape and other sexual offences, transfusion, reactions and blood group incompatibility states; allergic states and anaphylactic deaths.
Recent advances in analytical techniques as applied to Forensic Medicine and Toxicology.
Fundamentals of Immunology - Immunoglobulins, Immunological Principles, Terms and Theories, Antigens, Antibodies, complement etc.
- Antigen - Antibody reactions and the principles involved.
- Allergy and anaphylaxis and their medicolegal aspects.
- Agglutinins and agglutinogens - plant agglutinins.
- Cellular antigens and blood group systems and their median inheritance.
- Serum protein groups - Gm, Gc Type, Haptoglobins, transferrin type, lipoprotein groups.
- Polymorphic blood enzyme - serum esterases, erythrocyte esterases, blood phosphatase, cholinesterase, pseudo-cholinesterase, lactic dehydrogenase, glucose 6 phosphatase dehydrogenase red cell phosphogluco - mutase and alkaline phosphatase etc.
Hemoglobin and its variants.
Problems of Individualisation of finger - printing of blood stains

Group factors in other body fluids and tissues,
Methods of raising purification and titration of group specific and species specific antisera.

(E) FORENSIC ANTHROPOLOGY INCLUDING FORNSIC ODONTOLOGY :

Surface landmarks of anthropological significances.

Identification techniques – finger and palms prints (dermatoglyphics) foot – prints, lip- prints and palate – prints.

Identification form complexion and features, bodily measurements and weights, anthropometric measurement in the living – Birtllon's method; measurement and descriptive characteristics of Head and face, hair – Forensic hair study.

Skeleton : age – earlier years; age later years.

Sexing of skeletal remains.

Calculation I of stature from skeleton or parts thereof .

Race differences in human skeleton .

Anthopomotry as related to skull and individual bones like clavicle; Scapula, long bone; Vertebrae, hip bone & Pelvis; Saxcrum; Talus, Calcaneus etc.

Pacial reconstruction form skull and super – imposition technique Comoerative osteology – identification of human and common domestic and wild animals from skeleton.

Forensic Odontology – Historical back grounds of .

Testh and identification – racial features, sex geographical distribution, occupation, habit and socio- economic status.

Identification from dental peculiarities , dental remains and dental restoration – artificial denture and dental fittings .

Age determination from teeth - dentition – temporary and permanent, and secondary dental changes (Guestafson's method).

teeth and crime – bite marks, battered baby.

Teeth and trauma – accidental injuries and criminal assaults.

Pathological changes in jaw bones and teeth caused by poisons.

Teeth and negligence – malpraxis in dentistry and failure to preserve trace evidence.

Collection and PRESERVATION of skeletalremains and teeth for enthropometric studies.

Age of skeletal remains – how old are the remains radioactive tracer studies and elemental analysis.

Use of Radiology in skeletal and dental identification.

(F) MEDICAL LAW ETHICS AND HUMAN RIGHTS :

- Law relating to medical expert evidence : nurt and homicide , infanticide; suicide and accidents; sterilization family planning contraception and abortion; treatment, care and custody of the insane and insane oriminals ; sexual offences sex perversions; legitimacy adoption, divorce and nullity of marriage ; certification and disposal of dead; sale of drugs and poispsnspharmacy and drug acts; anatomical and tissue donation acts; industrial hazards and workman's compersation acts; medical and allied professions – Medical Council and Medical degrees acts.
- Powers and functions of the Indian and state Medical Councils.

- Doctor's duties / liabilities in Criminal matters, Under the prevention of communicable diseases act; in food adulteration acts; in public health and Sanitation acts.
- Rights and duties of Registered Medical Practitioner, Disciplinary Control and Infamous conduct.
- Liability for unauthorized autopsies and related procedures.
- Doctor's duties and liabilities in general and hospital Practice, standards of medical negligence and the medico-legal misadventures.
- Professional secrecy and privileged communications.
- Physician's liabilities for defamation.
- Medico-legal and ethical problems relating to artificial insemination, embryo transfer, test – tube fertilization and genetic engineering.
- Legal and ethical aspects of sex change operations.
- Advances in Scientific and Medical Technology and their legal and ethical implications.
- Professional liability, Insurance and Medical defense societies.
- Medico-legal aspects of resuscitation and intensive care.
- Medico-legal and ethical aspects of emergencies in general and hospital practice.
- Medical expert witness and his testimony problems of confidentiality and privileged communication in the court of law.
- Physicians's liabilities while attending in will making.
- Psychiatrist's patient testimonial privilege.
- Hippocratic oath and code of Medical ethics.
- Ethical questions relating to the use of Red cross symbol.
- Rights of : the unborn and the minor: protection against physical and mental torture brain washing, and physician's liabilities : the patient in General and Hospital practice; Health and right to work and obligation of the State and physicians; the dying and right to life – Euthanasia and suicide.
- Patients rights of privacy and physical integrity and physicians liabilities for violation or invasion thereof.
- Legal concept of property, in the dead body, disposal of the dead and survivors rights.
- Legal and ethical problems relating to therapeutic trials, human experimentations and innovative therapy.
- Medico-legal aspects of : the moment of death and organ / tissue transplantation; Sports and medically prescribed exercises; stress situations.
- Consent in medical Practice and compulsory medical examination and treatment.
- Rights against self incrimination.
- Legal value and implications of patient's medical records and patient's right to inspect and obtain copies thereof.
- Legal and ethical aspects of food additives.
- Public Health, Legal and Ethical aspects of environmental pollution.
- Medicine in War – time – right of wounded or sick, enemy soldiers, Prisoners of war and Civilians to medical care and treatment and legal and ethical aspects of biological warfare.

(G) "TRAUMATOLOGY INCLUDING MEDICOLEGAL ASPECTS OF WOUNDING" :

- Definitions and general consideration of wounds.
- Classification of wounds caused by mechanical trauma.
- Histopathology and medico-legal aspects of blunt force injuries;

- Cutting injuries; stabbing injuries; fire – arm injuries and injuries caused by detonation of explosives.
- Medicolegal aspects of wounds on general.
- Postmortem injuries and artifacts.
- Examination of the injured person in life.
- Postmortem examination in traumatic deaths.
- Systemic response to trauma – local and general.
- Secondary effects and complications to trauma
- Post traumatic thrombosis and embolic manifestations. infective diseases, general – septicemia and pyaemia and specific infective diseases following trauma.
- Acute renal failure after injuries.
- Pathology of wound healing and repair and timing of the wounds.
- Diseases and morbid states caused by trauma.
- psychic changes and disabilities following trauma.
- Exacerbation of diseases caused by trauma.
- Trauma and tumour.
- Regional and systemic injuries and their medicolegal aspects.
- Disabilities following trauma – disability evaluation and reporting.
- Wounds caused by electricity and lightning.
- Thermal injuries – wounds caused by heat and cold.
- Radiation effects and injuries.
- Injuries produced by increased atmospheric pressure – blast injuries; decreased atmospheric pressure ; criminal miscarriage; chemical agents.
- Transportation injuries and hazards caused on the roads, railways aviation and navigation.
- Perinatal and neonatal injuries – infanticide and battered baby.
- Injuries in sports.
- Injuries due to sexual assaults and sex perversions.
- Domestic hospital and laboratory accidents and injuries.
- Hazards in industries , mines and agriculture.
- Injuries in war.
- Injuries caused by: the animals and insects; violent asphyxia.
- Role and scope of Radiological investigation in Forensic Traumatology.

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CURRICULUM OF POSTGRADUATE TRAINING AND EXAMINATION PATTERN IN M.D. (FORENSIC MEDICINE) OF SOUTH GUJARAT UNIVERSITY CONSISTS OF THE FOLLOWING :-

1. A series of postgraduate lectures by P.G. teachers
2. A series of Seminars by the P.G. Students.
3. Postgraduate case discussions on Authopsy , injuries, Insanity, Age, Impotency, Sexual Offences, Poisoning etc.
4. Postgraduate Tutorial classes – chapter or subject – wise.
5. Attending and performing medico – legal autopsies.
6. Attending and performing medico – legal work at the Casualty.
7. Participation in undergraduate theory and practical teaching .
8. Undergoing training when posted in different units and laboratories if the department.
9. Short periods of posting in the departments of Psychiatry, Radiology, Pathology, Odontology, Anatomy, Bio- Chemistry and Microbiology.
10. Persuing the thesis work / dissertation work on the topic allotted by the P.G. teacher.
11. Participation in the departmental research work.
12. Visits to the scene of offence to be arranged by the professor with the help of police.
13. Attending the courts to given evidence.

PASSING STANDARD :

passing of the candidate will be decided by his over all performance as judged by the panel of four examiners.

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EXAMINATION IN M.D. (FORENSIC MEDICINE) CONSISTS OF THE FOLLOWING :

1. Four theory papers of 3 hours duration each as stated below :
(The theory paper may consists of multiple choice / short answer / Essay type questions)
 - (A) Basic medical Sciences in relation to Forensic Medicine including Anatomy, Physiology , pathology.
 - (B) Clinical Forensic Medicine including Forensic Psychiatry, Medical Jurisprudence, Medical Law and Ethics.
 - (C) Forensic pathology including Thanatology , Autopsy Pathology and Forensic immunology.
 - (D) Recent advances, Toxicology and Allied Forensic Sciences.
2. Clinical and Practical
3. Viva – voce.

The practical and viva- voice examination may last for two days on the subjects covered by the theory papers and the syllabus. This examination shall consists of the following :-

- (A) Autopsy examination
 - (B) Injury case examination
 - (C) Age case examination
 - (D) Insanity case examination
 - (E) Spot examination reporting on microscope slides, skeletal remains, bones, X-ray plates, Photographs, weapons and exhibits of medico – legal importance.
 - (F) A session with projected slides for spot diagnosis.
 - (G) Immunological exercise, section cutting and staining of the tissues for histopathological examination.
 - (H) Expert opinion file.
 - (I) A simple bacteriological exercise – Identification of the Bacteria.
- Viva – voce shall cover all the sections in Forensic Medicine, Toxicology and allied subjects covered in theory papers and practical examination.

PLEASE NOTE :- The candidate are required to produce their record books of well documented medico- legal autopsies cand other medico – legal oase examination reports conducted / attended by them to the examiners at the time of practical examenation.